

PCT/EP2004/001968

Amended claims according to Article 19 PCT

1. An apparatus for descaling hot rolled stock, being moved with respect to the apparatus, by spraying it with high pressure water, comprising at least one row of nozzle heads sweeping across the width of the rolled stock with a plurality of nozzle heads (20), each nozzle head being motor-driven in rotation about an axis of rotation (A) substantially perpendicular to the surface (27) of the rolled stock and comprising at least two nozzles (1 to 8) which are disposed eccentrically with respect to the axis of rotation (A), the nozzles (1 to 8) of each nozzle head (20) being arranged as closely as structurally possible to the circumference (25) of the nozzle head, whereby a spray pattern is created on the surface (27) of the rolled stock in a way to touch or overlap the spray pattern of the adjacent nozzle head (20) in the row of nozzle heads, and the nozzles (1 to 8) being arranged in the nozzle head (20) radially inclined outwardly at an angle of inclination ( $\alpha$ ) in the range of  $0^\circ \leq \alpha \leq 12^\circ$ , and inclined in circumferential direction (f,f') of the rotation of the nozzle head (20).

2. The apparatus as claimed in claim 1, characterized in that the angle of inclination ( $\beta$ ) of the nozzles in circumferential direction lies in an angular range of  $0^\circ < \beta \leq 30^\circ$ , especially in the angular range of  $\beta \approx 15^\circ \pm 2^\circ$ .

3. The apparatus according to one of claims 1 or 2, characterized in that adjacent nozzle heads (20, 20) in the row of nozzle heads are driven in counter-rotating sense.

4. The apparatus as claimed in any one of claims 1 to 3, characterized in that the jet opening angle ( $\varepsilon$ ) of the jet exiting from the nozzles (1 to 8) is no greater than  $15^\circ$ , especially no greater than  $10^\circ$ .

5. The apparatus as claimed in any one of claims 1 to 4, characterized in that at least six nozzles are arranged evenly distributed around the circumference of each nozzle head.

6. The apparatus as claimed in claim 5, characterized in that eight nozzles (1 to 8) are arranged evenly distributed around the circumference of each nozzle head (20).

7. The apparatus as claimed in any one of claims 1 to 6, characterized in that pairs or groups of nozzle heads in the row of nozzle heads are adapted to be switched off or on in correspondence with different widths of rolled stock.